

JFSP Project Highlights

Research Supporting Sound Decisions

September 2005



The JFSP, a partnership of six federal wildland fire and research organizations, provides scientific information and support for fuel and fire management programs.

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Pictures Make The Story Better The Digital Photo Series

Managers have relied on fuels photo series to provide a quick, easy method to describe and quantify fuel loadings and vegetation properties. This information is critical for making fuel management decisions and for predicting fire behavior and fire effects. The Digital Photo Series, scheduled for release in December 2005, takes a good idea into the electronic age.



How Did We Get Here?

Over the last decade, a significant national effort has been focused on developing new photo series for previously unrepresented vegetation types. Most recently, photo series have been (or will soon be) published for:

- hardwoods with spruce (Alaska)
- jack pine (Central and Lake States)
- Oregon white oak, California deciduous oak, and mixed conifer with shrubs (western US)
- sand hill, sand pine scrub, and hardwoods with white pine (southeast US)
- northern hardwoods, pitch pine, and red spruce/balsam fir (northeast US)



The Digital Photo Series contains data and images from over 350 sites describing fuels in a wide range of ecosystems across the United States.

Why Digital Photo Series?

The original photo series were designed for field use and are not fully utilized in the planning environment. Technological advances since the inception of the original Photo Series projects, coupled with development of new fire-and natural resource-based software applications highlight the need for an electronic version of the Photo Series.

What Does It Look Like?

The Digital Photo Series is a user-friendly interface to the large, detailed database of fuels information and high quality photographs. Each entry includes, among other items, a description of the site, species composition, fuel loading and arrangement, and overstory composition and structure. These data can be used for planning fuels treatments or other management actions, and as inputs to fire behavior and fire effects tools. The Digital Photo Series will have the ability to grow and evolve as new photo series are developed and as the priorities and needs of fire and fuels managers change.

Photo Series Explorer (Updated tree to select sites)

[Site search]

Volume VII: Western United States > Oregon white oak > WO 06

SITE INFORMATION

Coordinates: N 47° 3' 37.61" W 120° 30' 29.14"
 Land owner: Fort Lewis Military Reservation (U.S. Army)
 SAP Cover Type: Oregon White Oak (SAP 233)
 Plant Association: Oregon white oak woodland
 Ecological Division: Platte (248)
 Ecological Province: Pacific Lowland Mixed Forest (242)
 Fire history: Last burn occurred 2.5 years prior to photo

State: Washington
 Elevation: 15 ft
 Slope: 0%
 Crown class: 50%

SITE SPECIES

Tree species (% of stems): *Quercus garryana* (95), *Prunus* spp. (2), *Crataegus* spp. (2)
 Seedling species (% of stems): *Quercus garryana* (95), *Prodracyna menziesii* (2)
 Shrub species (% cover): *Cytisus scoparius* (55), *Malvastrum* spp. (7)
 Understory species (% cover): *Graminoids* (70), *Cytisus scoparius* (55), *Asteraceae* (10), *Urtica* spp. (7), *Malvastrum* spp. (4), *Symphoricarpos albus* (3), *Rubus discolor* (2)
 Forb species (% cover): *Asteraceae* (10)

UNDERSTORY VEGETATION

	Lifeform			
	Seeding	Shrub	Forb	Graminoid
Coverage (%)	--	68	12	70
Avg height (ft)	--	2.7	0.6	1.0
Biomass (lbs/ac)	--	2,676	375	1,210
Density (stems/ac)	368	--	--	--

SAPLINGS AND TREES

	Size class (diameter at breast height)				
	<= 4"	4 - 6"	6 - 10"	10 - 14"	> 14"
Most common species (% of stems)	<i>Quercus garryana</i> (95), <i>Prunus</i> spp. (5)	<i>Quercus garryana</i> (100)	<i>Quercus garryana</i> (100)	--	<i>Quercus garryana</i> (100)
Tree density (stems/ac)	144	246	7	0	253
Live	50	246	7	0	253
Dead	94	0	0	0	8
Avg DBH (in)	3.0	5.6	10.1	--	5.7
Live	3.6	5.6	10.1	--	6.7
Dead	1.7	--	--	--	--
Avg height (ft)	9.0	23.0	36.0	--	24.0
Live	14.9	23.0	36.0	--	24.0
Dead	7.0	--	--	--	--
Avg height to crown base (ft)	4.0	7.0	6.0	--	7.0
Live	6.0	7.0	6.0	--	7.0
Dead	2.0	--	--	--	--
Avg height to live crown (ft)	6.0	6.0	11.0	--	9.0

WOODY MATERIAL

Diameter (in)	Loading (tons/ac)		Density (pieces/ac)	
	Solid	Rotten	Solid	Rotten
<= 0.25	0.10	0	0.10	--
0.26 - 1.1	0.30	0	0.30	--
1.1 - 3.0	0	0	0	--
3.1 - 9.0	0.10	0	0.10	7
> 9.0	0	0	0	0
Total	0.50	0.00	0.50	7

FOREST FLOOR

	Depth (in)	Loading (tons/ac)	Conductivity (percent)
Surface material	1.0	2.20	67
Duff	0.6	3.50	85
Total forest floor	1.3	5.70	95
Mineral soil			0

Take a Peek

Again, the planned release date is December 2005. Users will be able to access the data and images using their web browser through an internet connection, or if not plugged in (for example, in the field or at fire camp), then by loading the data and images onto their computer from a CD. Either way the Digital Photo Series will have the same look, feel, and functionality. Work in progress can be previewed online: contact Clint Wright (cwright@fs.fed.us) via e-mail for details.



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